Archives of Psychiatry and Psychotherapy, 2011; 2 : 59–65

Gender and presence of profound psychological traumas versus the presence and intensity of panic disorder in difficult and severe asthma and aspirin--induced asthma of different severity

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Summary

Background. The author examined psychiatrically a group of 106 patients with difficult asthma and 100 patients with aspirin-induced asthma of different severity. The special interest of the study was the careful analysis of the time, context and content of different psychological traumas that the asthmatic patients from both groups had throughout their lives.

Methods. 106 consecutive adults with confirmed, physician-diagnosed difficult asthma and 100 patients with aspirin-induced asthma underwent psychiatric interview and assessment using M.I.N.I 5.0 and Panic And Agoraphobia Scale (PAS). Psychiatric assessment was performed by experienced liaison psychiatrist according to ICD-10 and DSM-IV diagnosis. Difficult and aspirin-induced asthma presence was assessed by pulmonologist according to NHLBI/NAEPP 2007.

In difficult asthma group there were 78 women (74%) and 28 men (26%). The average age was 51.3 (SD=14.5) for women and 47.5 (SD=12.7) for men.

In aspirin-induced asthma group there were 66 women (66%) and 34 men (34%). The average age was 52.7 (SD=12.3) for women and 48.8 (SD=13.0) for men.

Results. In both groups of asthmatic patients women were majority (74% with difficult asthma and 66% with aspirin-induced asthma) with higher level of panic disorder symptoms than men. It may be due to specific trauma of suffering and/or death of emotionally close person, which occurred in adulthood. This type of trauma may have an impact on the aetiology of panic disorder. Women are more exposed to this sort of trauma than men due to their social role.

Conclusions. It is possible, that psychological traumas affect the development, course and severity of panic disorder in asthmatic patients. They may play a special role in development of difficult asthma.

asthma / panic disorder / gender / trauma

INTRODUCTION

Both difficult and aspirin-induced asthma are distinct asthma phenotypes in which the achievement of good treatment outcomes is usually very complicated, even if treatment itself is conducted according to worldwide accepted standards. In both types of these asthmas women are majority and the reason of this tendency, observed both in developed and developing countries remains unclear [1, 2, 3, 4].

Central to any description of difficult asthma is a disconnection between expectations and outcome of proper treatment that means not fully understood resistance to treatment. Difficult

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The study was independent and not financed

asthma may be defined as being present in a patient with a confirmed diagnosis of asthma whose symptoms and/or lung function abnormalities are poorly controlled with treatment which experience suggests would usually be effective. This immediately begs the question of who confirmed the diagnosis, how the diagnosis was made, whether the symptoms and lung functions abnormalities are due to entirely to the diagnosis of asthma. But if so – and it is situation of the present study – such situation raise the question of co-existing problems. In pulmonology generally there is the tendency to underline the mood enhancing properties of oral steroids, but against this attitude internists themselves have important argument concerning the fact, that difficult asthma can occur in patients with objectively mild and moderate asthma, when oral corticosteroids are nor used. Nevertheless the most dramatic consequences of treatment resistance takes place in severe and near-fatal asthma [1, 2]. The present study cohort belongs to the last type of difficult asthma.

Similar, but not so dangerous problems connected with achieving good asthma control are present in aspirin-induced asthma (AIA) which may occur in about 21% asthmatics when analyzed by aspirin challenge procedures [3]. Recently in Poland it's prevalence according to questionnaire study was estimated at 4.3% [4]. The characteristic symptoms of AIA natural course consist of: persistent rhinosinusitis followed by asthma and aspirin hypersensitivity. This last symptom is associated with increased asthma severity and more than half of patients with AIA require treatment with oral corticosteroids. Despite treatment with inhaled and oral corticosteroids 59% patients with AIA have very poorly controlled asthma and fulfil the general description of difficult asthma [5].

Due to problems with achieving good asthma control, in recent years is increasing awareness of the association between the course, severity and problems in treatment and psychiatric and psychological problems [6, 7, 8, 9]. Historically, the main interest in this new field was comorbidity of asthma and depression [6] but it seems, that earlier and more important predictor of asthma severity and difficulties in treatment is panic disorder (PD) [7]. The growing interest within the research on asthma and PD is the life course content, especially different types of traumas throughout the whole life, from childhood to late adulthood that may have the strong impact on development of anxiety symptoms including panic attacks. There is vast psychiatric literature on this subject, confirming, that similarly to asthma, also PD is much more common among women than in men [8, 9, 10, 11, 12, 13, 14, 15]. This worldwide fact is also not scientifically explained yet. Analyses of presence, course and outcome of PD in women and men show some special features that seem connected with gender, but may also be biased by culture. There is also an attempt to look for some analogies between PD and PTSD [16, 17, 18, 19, 20, 21, 22, 23, 24, 25], and especially asthma and PTSD [18] due to increasing evidence that panic attacks play a role in psychopathological response to trauma. Polish studies [26, 27, 28, 29] confirm the link between PD and traumatic events, especially through psychopathological response to specific trauma of suffering and/or death of emotionally close person, which occurred in adulthood. This type of trauma may have impact on the development of PD and further increase of severity of asthma and also difficulties in its treatment. Women are more exposed to this sort of trauma due to their social role.

GOALS OF THE STUDY

This study investigated:

1. Presence of serious psychological traumas of childhood and specific traumas of adulthood (trauma of suffering or death of emotionally close person due to long-lasting and serious somatic disease) that occurred close in time to the beginning or worsening of severe and difficult asthma and aspirin-induced asthma of different severity in two cohorts of asthmatic patients.
2. Relationship between the presence and frequency of both types of traumas and gender of patients.
3. Correlation between presence of both types of traumas and also presence and intensity of PD symptoms in two different cohorts of asthmatic patients (difficult and severe and aspirin-induced of different severity).

Criteria of trauma of childhood included: long-lasting psychological and physical abuse of the child, neglect, domestic violence, alcoholism in family, severely bad economic status (eg due to Second World War), loss of parent, violent divorce of parents.

Criteria of trauma of adulthood included: to be engaged witness, taking care of severely ill or dying emotionally close person. The onset or worsening of asthma is very often close in time to such long-lasting sequence of events.

Note! The description of specific trauma of adulthood **is not** consistent with A1 criteria of Posttraumatic Stress Disorder (PTSD), which states that "the person experienced, witnessed, or was confronted with event or events that involved actual or threatened death or serious injury, or a threat to the physical integrity of self or others". But at the same time is consistent with A2 criteria of PTSD: "the person's response involved intense fear, helplessness, or horror".

METHOD

Participants: The cohort A comprised 100 adult patients with diagnosis of AIA who were assessed and treated in Department of Pulmonology Jagiellonian University Medical College. There were 66 women and 34 men. Mean age in this cohort was 51.7 years (SD=12.5), for women 52.5 years (SD=12.3), for men 48.8 years (SD=13.0).

To the group with intermittent asthma pulmonologist included 20% of the cohort, to mild persistent asthma 21%, to moderate persistent asthma 30%, and to severe persistent asthma 29% of the cohort.

The cohort B comprised 106 adult patients with diagnosis of severe and difficult asthma treated in the same place. There were 78 women and 28 men. Mean age for women was 51.3 years (SD=14.3) and for men 47.5 years (SD=12.7).

The only inclusion criteria were diagnoses according to pulmonological classification NHLBI/NAEPP 2007. No one of the patients refused the assessment.

Measures: Diagnosis of PD was obtained by MINI (Mini International Neuropsychiatric Interview, polish version 5.0.0) and Panic and Agoraphobia Scale (PAS).

M.I.N.I (Mini International Neuropsychiatric Interview). Authors: Sheehan D.V., Lecrubier Y. 1998. Polish version (5.0.0): Masiak M., Przychoda J. Departament of Psychiatry, Lublin, Poland. M.I.N.I is brief, fully structured interview designed to diagnose mental disorders according to Axis I DSM-IV [30].

*Panic and Agoraphobia Scal*e (PAS). Author: B. Bandelow, Department of Psychiatry of Goettingen, version 1999 [31]. It is a special instrument necessary for determining the severity of PD. The scale contains 13 questions (items) each with 5 possible answers (0-4). Five components have been taken into account: panic attacks, agoraphobic avoidance, anticipatory anxiety, disability and worries about health.

Assessment: 0-8: lack of symptoms; 9-18: mild symptoms; 19-39: moderate and severe symptoms; 40 or more: very severe symptoms.

Participants were also administered *the Life Inventory*, which is 100-item interview that possess questions about generic family, relations between it's members, economic status, important events from childhood, school, difficulties in adaptation to social environment, level of education, work, marital status, employment, history of panic attacks preceding PD onset, having children, diseases present in the family (this subject was very detailed, with questions about character of patient's duties). To the category of "trauma of adulthood" only most severe, long-lasting and engaging to patient diseases were included.

Statistical analysis: Student's t-test and chi-squared test were used for bivariate analyses. Categorical variables were compared using chi-squared test.

RESULTS

1. In the group A (patients with aspirin-induced asthma) traumas during childhood were present in 12 patients and in the group B (patients with severe and difficult asthma) in 22 patients (Tab. 1). Traumas during adulthood (specific trauma of suffering and/or death of emotionally close one) were present in 38 patients from group A and in 86 patients from group B (Tab. 2). Especially the last types of traumas were statistically more common in the group B

(p<0.001). Moreover both types of traumas were present much more frequently in women than in men (Tab. 1 and Tab. 2).

In the group B sequence of traumas (presence of both types of trauma) were found much more frequently than in the group A. At the same time lack of both types of traumas w in the group A was much more frequent than in the group B (Tab. 3).

Table 1. Traumas during childhood

Trauma during childhood		
	Group A (n=100) Aspirin-induced asthma	Group B (n=106) Severe and difficult asthma
Women	11	16
Men	1	6
	12% in the group	21% in the group

Table 2. Traumas during adulthood

Trauma during adulthood		
	Group A (n=100) Aspirin-induced asthma	Group B (n=106) Severe and difficult asthma
Women	33	63
Men	5	23
	38% in the group	81% in the group

Table 3. Frequency of both types of trauma in the group A and the group B, independently of gender.

		Traumas of adulthood			
		Group A Aspirin induced asthma		Group B Severe and difficult asthma	
		Lack	Present	Lack	Present
Traumas of childhood	Lack	58	30	16	68
	Present	4	8	4	18

2. In the group A the correlation between presence of traumas during childhood and intensity of PD symptoms was statistically significant (p=0.0003). In the group B statistical correlation seems to suggest, that intensity of PD symptoms is independent from traumas during childhood (Tab. 4).

3. As well as in the group A and in the group B there is statistical correlation between the presence of trauma during adulthood and intensity of PD (p<0.001) (Tab. 5 – *next page*).

DISCUSSION

In both research groups (A: aspirin induced asthma and B: severe and difficult asthma) and also in subgroups of women and men, traumas in adulthood were present much more frequently than traumas in childhood (Tab. 1 and Tab. 2). The interesting result is also the tendency indicating that in both groups the presence of traumas of childhood seems to be connected with presence of traumas of adulthood (Tab. 3). It may not be just the accident, but the psychological consequence of sensitisation by sequence of traumas. Understanding the presence of traumas throughout the whole life and its relation to anxiety symptoms, especially PD, is essential in mapping the complicated aetiology of anxiety disorders [16, 17, 19]. Although stressful life events and also traumas do not always lead to anxiety disorders, people who have experienced such events and their sequence before the onset of anxiety disorders display generally lower global functioning and higher severity of anxiety symptoms. The study confirmed this wide-

Table 4. Intensity of PD symptoms (measured by PAS) and presence of traumas during childhood independently of gender

Group A. Aspirin-induced asthma	Intensity of PD symptoms				
		Lack	Mild	Moderate	Severe
Traumas of childhood	Lack	55	9	23	1
	Present	4	0	5	3
Group B. Severe and difficult astma	Intensity of PD symptoms				
		Lack	Mild	Moderate	Severe
Trauma of childhood	Lack	21	7	43	13
	Present	4	2	11	5

Table 5. Intensity of PD symptoms (measured by PAS) and presence of traumas during adulthood independently of gender

Group A. Aspirin induced asthma	Intensity of PD symptoms				
		Lack	Mild	Moderate	Severe
Traumas during adulthood	Lack	51	5	6	0
	Present	8	4	22	4
Group B. Severe and difficult astma	Intensity of PD symptoms				
		Lack	Mild	Moderate	Severe
Trauma during adulthood	Lack	11	0	9	0
	Present	14	9	45	18

ly known fact (Tab. 4 and Tab. 5). The life course approach has yet to make same impact on understanding not only psychiatric and psychological problems important in research of PD, but also its role in development of severe, difficult and near fatal asthma. Such approach is still rarely present in contemporary studies [7, 8, 9].

It seems intuitive that traumatic events would have an effect on the presence of anxiety symptoms immediately after the event; however the results of the study seem to suggest that some traumatic events, such as those that occur in childhood are still associated with increased risk of PD many years later. That means that the effects of traumas during childhood can be long-lasting, that has been proved in many different studies worldwide [16, 17, 18, 19, 20, 21, 22, 23, 24, 25]. Moreover, this study reveals that in both groups (A and B) in majority of patients without traumas in childhood PD symptoms were not present also. But when this type of traumas were present, PD moderate and severe symptoms were found twice more frequently in the group A (4 v 8 patients) and four times more frequently in the B group (4 v 16 patients) – Tab. 4.

The impact of another type of traumas that occur in adulthood (long-lasting and immediate taking care of severely ill or dying emotionally close person) is still underestimated in research concerning both PD and its influence of its intensity on development of severe and especially difficult asthma, although Polish studies [26, 27, 28, 29] confirm such connection in different groups of patients (asthmatics, patient with COPD and pure PD). This study is the next one from this complex research.

In the group A (Tab. 5) 51 patients without traumas of adulthood didn't have PD symptoms also. In the rest of 11 patients without this type of trauma symptoms of PD were mild and moderate, and severe symptoms were not present at all. But while this type of traumas was present only 8 patients didn't have PD symptoms, mild and moderate PD symptoms were present in 26 patients and severe PD symptoms in 4 patients.

In the group B (Tab. 5) only 11 patients didn't have traumas of adulthood in their past and also didn't have PD symptoms at present. The rest of 9 patients without this type of trauma PD symptoms were of moderate intensity. But while this type of traumas was present, 63 (from 86 patients) suffered from moderate and severe PD symptoms.

These results seem to suggest, that there is very strong statistical correlation between the presence of traumas of adulthood and intensity of PD symptoms. Due to the results of some studies [7, 8, 9] PD is one of important predictors of asthma severity – if so, there is also the link between presence of traumas of adulthood and severity of asthma and difficulties in its treatment.

Women are more vulnerable to this type of trauma due to their social role. It may – to some extend – explain their majority in severe asthma population.

CONCLUSIONS

1. In group B (severe and difficult asthma) both types of traumas were much more frequent than in the group A (aspirin-induced asthma).
2. There was statistical correlation between frequency of both types of traumas in both research groups. In the group B sequence of traumas (presence of both types of traumas) was much more frequent than in the group A.

3. Presence of one or two types of traumas revealed statistical correlation with intensity of PD symptoms in both research groups.

REFERENCES

1. Holgate ST, Boushey HA, Fabbri LM. Difficult asthma. London: Martin Dunitz Ltd. The Livery House; 1999.
2. Harrison BD. Difficult asthma. Thorax. 2003; 58: 555–556.
3. Jenkins C, Costello J, Hodge L. Systematic review of prevalence of aspirin induced asthma and its implications for clinical practice. BMJ. 2004; 328(7437): 434.
4. Kasper L, Sladek K, Duplaga M, Bochenek G, Liebhart J, Gladysz U et al. Prevalence of asthma with aspirin hypersensitivity in the adult population of Poland. Allergy. 2003; 58(10): 1064–1066.
5. Bochenek G, Kuschill-Dziurda J, Dziurda D, Niżankowska-Mogilnicka E, Szczeklik A. Severity, control and treatment of aspirin-sensitive asthmatics (ASA). Eur Respir J. 2009.
6. Scott KM, Korff von M, Ormel J, Zhang M, Bruffaerts R, Alonso J, Kessler RC, Tachimori H, Karam E, Levinson D, Bromet EJ, Posada-Villa J, Gasquet I, Angermeyer MC, Borges G, Girolamo G, Herman A, Haro JM. Mental disorders among adults with asthma: results from the World Mental Health Survey. Gen Hosp Psych. 2007; 29: 123–133.
7. Schneider A, Loewe B, Meyer FJ, Biessecker K, Joos S, Szecsenyi J. Depression and panic disorder as predictors of health outcomes for patients with asthma in primary care. Respir Med. 2008; 102: 359–366.
8. Alvarez GG, FitzGerald JM. A systematic review of the psychological risk factors associated with near fatal asthma or fatal asthma. Respiration. 2007; 74: 228–236.
9. Halimi L, Vachier I, Varrin M, Godard P, Pithon G, Chanez P. Interference of psychological factors in difficult-to-control asthma. Respir Med. 2007; 101: 154–161.
10. Osman M. Therapeutic implications of sex differences in asthma and atopy. Arch Dis Child. 2003; 88: 587–590.
11. Gater R, Tansella M, Korten A, et al. Sex differences in the prevalence and detection of depressive and anxiety disorders in general health settings. Arch Gen Psychiat. 1998; 55: 405–413.
12. Yonkers KA, Zlotnick C, Allsworth J, Warshaw M, Shea T, Keller MB. Is the course of panic disorder the same in women and men? Am J Psychiat. 1998; 155: 596–602.
13. Weissman MM, Bland RC, Canino GJ et al. The crossnational epidemiology of panic disorder. Arch Gen Psychiat. 1999; 54: 305–309.
14. Eaton WW, Kessler RC, Wittchen HU, Magee WJ. Panic and panic disorder in the United States. Am J Psychiat. 1994; 151: 413–420.
15. Sheikh JI, Leskin GA, Klein DF. Gender differences in panic disorders: findings from the National Comorbidity Survey. Am J Psychiat. 2002; 159: 55–58.
16. Goodwin RD, Fergusson DM, Horwood LJ. Childhood abuse and familial violence and the risk of panic attacks and panic disorder in young adulthood. Psychol Med. 2005; 35: 881–890.
17. Albert U, Maina G, Bergesio C, Bogetto F. Nocturnal panic and recent life events. Depress Anxiety. 2005; 22: 52–58.
18. Goodwin RD, Fischer ME, Goldberg J. A twin study of posttraumatic stress disorder symptoms and asthma. Am J Respir Care Med. 2007; 176: 983–987.
19. Boscarino JA, Adams R. Peritraumatic panic attacks and health outcomes two years after psychological trauma: Implications for intervention and research. Psychiat Res. 2009; 15; 7(1-2): 139–150.
20. Sledjeski EM, Speisman B, Dierker LC. Does number of lifetime traumas explain the relationship between PTSD and chronic medical conditions? Answers from the national Comorbidity Survey-Replication (NCS-R). J Behav Med. 2008; 31(4): 341–349.
21. Ouimette P, Cronkite R, Henson BR, Prins A, Gima K, Moos RH. Posttraumatic stress disorder and health status among female and male medical patients. J Trauma Stress. 2004; 17: 1–9.
22. Bruce SE, Weisberg RB, Dolan RT, Machan JT, Kessler RC, Manchester G, Culpepper L, Meller MB. Trauma and Posttraumatic Stress Disorder in Primary Care Patients. Primary Care Companion. J Clin Psychiat. 2001; 3: 211–217.
23. Kessler RC, Sonnega A, Bromet E. Posttraumatic stress disorder in the National Comorbidity Survey. Arch Gen Psychiat. 1995; 52: 1048–1060.
24. Kessler RC, Wai Tat Chiu, Demler O, Walters E. Prevalence, severity and comorbidity of 12-month DSM-IV disorders in the National Comorbidity Survey Replication. Arch Gen Psychiat. 2005; 62: 617–627.
25. Zlotnick C, Johnson J, Kohn R, Vicente B, Rioseco P, Saldivia S. Childhood trauma, trauma in adulthood and psychiatric diagnoses: results from a community sample. Compr Psychiat. 2008; 49: 163–169.
26. Potoczek A. Zespół lęku napadowego a trauma choroby i śmierci. Psychoterapia. 2003; 2(125): 48–56.
27. Potoczek A, Niżankowska-Mogilnicka E, Bochenek G, Szczeklik A. Astma ciężka i płeć chorych a obecność doznanych urazów psychicznych. Psychiatr Pol. 2006; XL(6): 1081–1096.
28. Potoczek A, Niżankowska-Mogilnicka E, Bochenek G, Szczeklik A. Ciężka POCHP i płeć chorych a obecność doznanych urazów psychicznych. Psychiatr Pol. 2008, XLII(5): 719–730.

29. Potoczek A. Zespół lęku napadowego i płeć chorych a obecność doznanych urazów psychicznych. Psychiatr Pol. 2009; XLIII(5): 571–580.
30. M.I.N.I.5.0.0 Polish Version (DSM-IV) Lecrubier Y, Weiller E, Hergueta I, Amorim P, Bonora LI, Lepine JP. Inserm-Paris; France. Sheehan D, Janavs J, Baker R, Sheehan KH, Knapp E, Sheehan M. University of South Florida-TAMPA; USA; 1998. Polish translation: Masiak M, Przychoda J. Katedra i Klinika Psychiatrii Akademii Medycznej w Lublinie; Poland.
31. Bandelow B. Panic and Agoraphobia Scale (PAS). Seattle, Toronto, Bern, Goettingen: Hogrefe and Huber Publishers; 1999.

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